

Awareness of HIV/AIDS amongst Pregnant Women of Rural Areas, Patna: A Community-Based Study

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Abstract: *Objective-* to assess the knowledge of HIV/AIDS and MTCT (Mother-to-child transmission) among pregnant women. *Method-* a cross-sectional study was conducted on 106 pregnant women attending the OPD of PHC Sampatchak from January 2012 to June 2012. The study tool consisted of self-developed, pre-tested questionnaire. Results were analysed using SPSS latest version. *Results-* 88.67% of the women were illiterate, 8.49% had primary education and 2.83% had an education up to middle school. Among the illiterate 79.24% had heard of HIV/AIDS while 20.76% had never heard of HIV/AIDS. Amongst the literates 100% had heard of HIV/AIDS. 79.24% had knowledge regarding transmission of HIV/AIDS and most of them quoted unsafe sex practices. It was noticed that only 8% had heard of mother to child transmission (MTCT) while 92% had no idea that they had chances of transmitting the infection to their unborn child if tested positive. Source of information were media (12.26%), TV (27.35%), health personnel (57.54%) and others (2.85%). *Conclusion-* Although 80.18% (i.e., majority) of the women had heard about HIV/AIDS and knew some aspects of it, the knowledge about MTCT was very sparse. This is suggestive of the need to scale-up health education about MTCT in the health facilities as well as in the community. This can be done by scaling -up the knowledge of peripheral health workers with the help of government and non-government organisations.

Keywords: Awareness; Knowledge; Mother-to-Child Transmission; HIV

1. Introduction

India accounts for about 7% of all HIV/AIDS cases in the world.[1] Globally, women constitute 48% of adults infected with HIV; in India, they constitute 39%. The prevalence is highest among productive young people between the ages of 20 and 29 years, with 60% of new infections occurring in the 15-25 years age group.[2,3]. Heterosexual transmissions account for more than 80% of all infections.[4] The pandemic is having a serious effect on the reproductive health of women in India.

The latest statistics of the world epidemic of HIV/AIDS as published by UNAIDS/WHO in Nov 2010 states that 33.2 million people were living with HIV, 2.7 million became newly infected with the virus, and 2 million people died of HIV related causes in a year.[4] There is an increase in the number of children infected with HIV in recent years as the number of HIV positive women has increased.[1] More than 90% of HIV infections in children aged less than 15 years are due to mother-to-child transmission of HIV.[5] In many developed countries, testing, antiretroviral therapy and infant-feeding modifications have been effectively used to eliminate mother-to-child transmission of HIV.[5,6]

In countries like India, HIV continues to be a problem due to lack of information, testing services and antiretroviral therapy.[1] The high prevalence of mother-to-child transmission has reversed the gains of the child survival strategy in the country. There is an urgent need to combat this menace. As we know that prevention of an infection is more important, therefore awareness of the various aspects of this disease deserves the ultimate importance from the strategic point of view. AIDS (Acquired Immune Deficiency Syndrome) represents the late clinical stage of infection with human immunodeficiency virus (HIV). The HIV/AIDS epidemic has gained momentum during the last one and the

half decade, expanding to all regions of the world and continues to be major global challenge. HIV/AIDS finds its victims in both rich and poor countries, but the hardest hit countries are between the developing and the underdeveloped nations. Two decades into the epidemic and there is still no vaccine and no "cure" for AIDS (Vinod k. Sharma, 2003).

2. Objective

To assess the knowledge of HIV/AIDS and MTCT (Mother-to-child transmission) among pregnant women.

3. Review of Literature

A review of literature is to ascertain what is already known in relation to a problem of interest, to develop a broad conceptual context in to which a problem will fit. It creates accurate picture of the information found on the subject. It provides basis to locate pertinent data and new ideas that need to be included in the present study. It helps the investigator to find the comparative data that could be used for supporting present findings and drawing conclusions[7].

A cross sectional study was conducted in Tehran, Iran to evaluate the knowledge of women about HIV and its vertical transmission and prevention among 1577 pregnant women aged 15 - 46 years who were attending prenatal care clinics. The result reported that about 16.5% of the participants had good knowledge about HIV/AIDS and 54.1% about its transmission routes but awareness about its prevention was only 5.7%. Fifty-seven percent of the participants were not tested for HIV earlier and 20.2% were not willing to undergo such tests. About 86.2% of the participants had no idea about the availability of drug prophylaxis in Iran for Prevention from Mother to child transmission. Although the overall awareness about the infection and its transmission was good,

the knowledge about its prevention by Prevention of Mother-to-child transmission services and its availability in Iran was low[8].

A descriptive study done in Temeke district of Tanzania showed that 68.1% of the participants had already had HIV testing, 31.9% had not. Participants' general knowledge of HIV was high, but specific knowledge of Mother-to-child transmission was relatively low.[9]

A cross sectional interview survey was conducted in Kep district of Cambodia in ten different villages among adults between the ages 18 to 58 years to assess the HIV/AIDS-related knowledge and practices of adults.. The findings were that the majority of respondents had an accurate knowledge about the modes of transmission and method of prevention of HIV but their understanding regarding mother-to-child transmission was low.[10]

The study at Ekiti State in Nigeria revealed that all the respondents were aware of HIV/AIDS. The majority (90%) of the respondents were aware that HIV/AIDS can coexist with pregnancy, but only 68% were aware of mother-to-child transmission. The results suggested that though the level of awareness of HIV/AIDS among women attending their antenatal clinic was high, the level of knowledge about mother-to-child transmission was inadequate[11].

The level of knowledge about HIV/AIDS among mothers was very high (100%) in a study at the pediatric HIV clinic of Amiu Kano Teaching Hospital Nigeria. The study concluded that there was a need to scale up education about Mother-to-child transmission of HIV in the health facilities[12].

A descriptive study was done in Samey, Kzakhstan among 520 women to evaluate their current knowledge, risk behavior and attitudes to voluntary counseling and testing concerning HIV/AIDS. The study concluded that the pregnant women in Semey have poor knowledge about specific Mother-to-child HIV transmission and do not know about the means of reducing Mother-to-child HIV transmission[13].

A descriptive study was conducted to assess the knowledge about HIV/AIDS and attitudes among consecutively selected pregnant women in Aksu Prefecture, North-Western China, with a population of 2 million with about 25, 000 pregnancies per year. A total of 291 pregnant women participated. The study found out a limited knowledge on mother-to-child transmission with several misconceptions. The AIDS campaigns have been successful in making all the women aware of HIV as a sexually transmitted disease but the common belief that social contact causes transmission gives a high risk that patients were stigmatized. The study suggested that it was important to design HIV information strategies that target pregnant women in North-Western China[14].

A cross sectional study using structured questionnaire was conducted in four major Indian cities. Surveys were completed by 210 women attending six primary health care centers. The study concluded that intervention efforts may

benefit from dispelling misconceptions about AIDS (particularly regarding vertical transmission), emphasizing perceived benefits and women's efficacy in requesting condom use, increasing the availability of HIV testing, and highlighting choices for seropositive women of reproductive age as alternatives to abortion[15].

4. Material and Methods

A Cross-sectional community based study was conducted on married pregnant women attending the antenatal OPD of PHC Sampatchak from January 2012-october 2012. PHC Sampatchak is the rural health training centre of Nalanda Medical College, Patna. Study tool consisted of a Self-developed ,pretested questionnaire.. A total of 106 married pregnant women were interviewed during the given period of study. Interviews were conducted with randomly selected women during their first antenatal visit at the OPD of PHC. For this study every fifth newly registered patient in the antenatal clinic (ANC) was interviewed if she was willing to participate in a structured interview regarding HIV/AIDS knowledge. Women were eligible for the study if they were between 18 and 44 years old. Data was analysed using latest version of SPSS.

5. Observations

The mean age of the study population was 21.7 years. Most of the women(88.67%) were illiterate and only 8.49% had education upto primary school.[Table 1]. All of them were Hindu by religion. In the present study knowledge regarding HIV/AIDS among literates was universal, while level of awareness was significantly lower in illiterate (78.72%) as compared to literates (100%). The relationship of education with the awareness regarding HIV / AIDS was not found to be statistically significant, may be due to small sample size. [Table 2]. The women belonged to either social class IV, V or VI.(modified B G Prasad classification). An association was present between social class of the women and their level of knowledge regarding HIV/AIDS, which was found to be statistically significant. It means with increasing socioeconomic level there was increase in the knowledge component regarding HIV/AIDS. [Table 3]

Health personnel was major source of information of HIV / AIDS, as it contributed for 49 (56.97%) of participants, while, mass media i.e.TV contributed for 24 (27.90%) and radio for 11(12.79%)of participants and others like friends ,families etc contributed for only 2 (2.32%) of participants.[graph 1]

Knowledge related to the transmission and prevention of HIV/AIDS was also poor. Very less participants were aware about correct modes of transmission of HIV / AIDS and some also mentioned „mosquito bite“ and sharing food and clothes, coughing, water as modes of HIV / AIDS transmission. There is clearly lack of awareness about transmission and prevention of HIV / AIDS. Very few participants were aware correct ways of prevention of HIV / AIDS. Trans-placental route as a mode of mother-to child transmission of HIV was known by 60% of the respondents. A significantly lower proportion of the respondents identified vaginal delivery and breastfeeding as routes of HIV

transmission (40% and 53%, respectively; $P < 0.05$). Sexual intercourse was identified as a route of transmission by 68% of the respondents who were aware of HIV/AIDS. Only about 8% of women had knowledge of Mother-to-child transmission.[Table 4]

In the present study cesarean section was believed to be a route of transmission by 2 (25%) respondents. About 38% of the respondents identified vaginal delivery as a route of mother-to-child transmission of HIV . Five (62.5%) women could not identify any route of mother-to-child transmission.[Table 5]

Table 1: Educational status

Education	Number	Percentage
Illiterate	94	88.67
Primary school	9	8.49
Middle school	3	2.83
Total	106	100

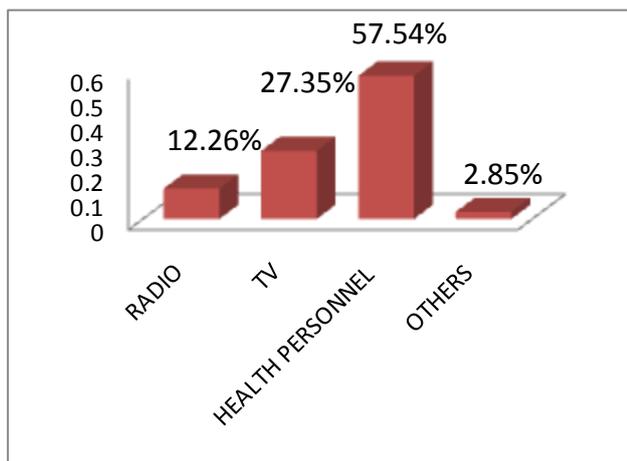
Table 2: Knowledge regarding HIV/AIDS

Educational status	Knowledge regarding HIV/AIDS		Total	$\chi^2=3.147$ df=2 p-value =.207
	Yes	No		
Illiterate	74(78.7%)	20(21.3%)	94	
Primary school	9(100%)	0	9	
Middle school	3(100%)	0	3	
Total	86	20	106	

Table 3: Social class and knowledge of HIV/AIDS

Social class	Knowledge of HIV/AIDS		Total
	YES	NO	
IV	15	0	15(14.2%)
V	51	2	53(50%)
VI	20	18	38(35.8%)
Total	86	20	106

$\chi^2=31.54$
df=2
p-value<.001



Graph 1: Source of information

Table 4: Knowledge regarding routes of transmission of HIV

Route of transmission	No. (%)
Sexual	68(79.06%)
Blood transfusion	18(21%)
Mother to child (MCTC)	7(8.13%)
Sharing sharps	1(1.16%)

Table 5: Knowledge regarding routes of mother- to- child transmission

Route of transmission	Number	Percentage
Placenta	2	25%
Vaginal delivery	3	37.5%
Caesarean section	2	25%
Breastfeeding	1	12.5%
Don't know	5	62.5%
n = 8		

6. Discussion

The mean age of the study population was 21.7 years. Most of the women(88.67%) were illiterate and only 8.49% had education upto primary school. All of them were Hindu by religion. In the present study knowledge regarding HIV/AIDS among literates was universal, while level of awareness was significantly lower in illiterate (78.72%) as compared to literates (100%) similar to a study conducted on AIDS awareness and knowledge of Indian women, done by D. Balk, S. Lahiri in 13 states of India where low rates of knowledge and awareness were reported more among rural and illiterate women (16). However in a study conducted in Tehran awareness about the infection and its transmission was good, the knowledge about its prevention by Prevention of Mother-to-child transmission services and its availability in Iran was low[8].

The relationship of education with the awareness regarding HIV / AIDS was not found to be statistically significant, may be due to small sample size. [Table 3]. In National Behavioural Surveillance Survey, 2006[17] carried out by NACO, it was seen that level of awareness about HIV / AIDS was lower in illiterates (45.8%) as compared to primary (77.7%), middle (91.6%), secondary and higher secondary (98.2%) and graduate and above (99.8%). As the education level increases the awareness about HIV / AIDS increases, which is because of the fact that illiterate people are less exposed to informative material than educated and the level of understanding of the information increases with education.

All the women belonged to either social class IV, V or VI.(modified B G Prasad classification). An association was present between social class of the women and their level of knowledge regarding HIV/AIDS, which was found to be statistically significant [Table 4]. It means with increasing socioeconomic level there was increase in the knowledge component regarding HIV/AIDS.

Health personnel was major source of information of HIV / AIDS, as it contributed for 49 (56.97%) of participants, while, mass media i.e.TV contributed for 24 (27.90%) and radio for 11(12.79%)of participants and others like friends ,families etc contributed for only 2 (2.32%) of participants. While in other studies it was seen that AIDS knowledge was more among those who had greater exposure to mass media (mainly television and radio)[16,17,18,19]

Knowledge related to the transmission and prevention of HIV/AIDS was also poor. Very less participants were aware about correct modes of transmission of HIV / AIDS and some also mentioned „mosquito bite“ and sharing food and clothes, coughing, water as modes of HIV / AIDS

transmission. There is clearly lack of awareness about transmission and prevention of HIV / AIDS. Very few participants were aware correct ways of prevention of HIV / AIDS. Trans-placental route as a mode of mother-to child transmission of HIV was known by 60% of the respondents. A significantly lower proportion of the respondents identified vaginal delivery and breastfeeding as routes of HIV transmission (40% and 53%, respectively; $P < 0.05$). Sexual intercourse was identified as a route of transmission by 68% of the respondents who were aware of HIV/AIDS. This agrees with a worldwide trend in which sexual intercourse is the route of transmission mostly known to respondents [20,21,22,23]. Blood transfusion and the sharing of razors and other sharp objects were identified by 18% and 1.16% of respondents, respectively, in this study as routes of transmission. It reflects lower level of awareness of HIV transmission by these routes [20,21].

In the present study cesarean section was believed to be a route of transmission by 2 (25%) respondent. About 38% of the respondents identified vaginal delivery as a route of mother-to-child transmission of HIV . Five (62.5%) women could not identify any route of mother-to-child transmission. Similarly in a descriptive study conducted in Aksu Prefecture, North-Western China, with a population of 2 million with about 25, 000 pregnancies per year a limited knowledge on mother-to-child transmission with several misconceptions was found [15].

7. Conclusion and Recommendation

The level of complete knowledge about HIV/AIDS is very low between among the married pregnant women Although 80.18% (i.e., majority) of the women had heard about HIV/AIDS and knew some aspects of it, the knowledge about MTCT was very sparse. This is suggestive of the need to scale-up health education about MTCT in the health facilities as well as in the community.

The knowledge of rural people about HIV / AIDS, its transmission and prevention should be improved with help of vigorous campaigning, training workshops, HIV / AIDS education sessions with special focus on migrant workers and their families. HIV / AIDS awareness campaigns should be increased at the time of religious festivals and fairs, as migrant workers tend to visit their native place during this period.

It is worthwhile to eliminate misconceptions, though it is a difficult task as they are deep-rooted into the belief system of individuals' and not universal too. Thus, how these misconceptions are socially represented in the particular social context need to be given priority as a prevention strategy for controlling HIV.

It is necessary to create suitable environments at community level to stimulate, support and sustain healthy lifestyle choices and fear and guilt free discussion on the issue of HIV / AIDS and condom. At the level of the individual, the interventions would focus on behaviour change, especially aimed at HIV / AIDS prevention. Capacity-building strategies for the diagnosis and treatment of HIV must be made available through the existing health care facilities.

Training of health professionals is an essential part of a cost-effective, evidence-based strategy for HIV / AIDS prevention and control because of their interaction with general as well as STI patients and pregnant women, as care providers and their role as health communicators in societies. Care and support activities for the HIV infected individuals and their families should be established through existing health facilities.

For community education, a public media campaign should dwell more on the aspect of prevention of mother-to-child transmission. There is also the need for increased collaboration with HIV/AIDS prevention programs. Finally, a more comprehensive evaluation of knowledge and attitudes of both men and women in the community about HIV/ AIDS and mother-to child transmission will provide added information for establishing community intervention programs.

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